

**magnasync**

  
**moviola**

*motion picture editing  
and tv equipment*

CATALOG E-181

**magnasync/moviola corporation**

A Subsidiary of Monogram Industries, Inc.  
NORTH HOLLYWOOD, CALIFORNIA

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# Moviola film editing machines

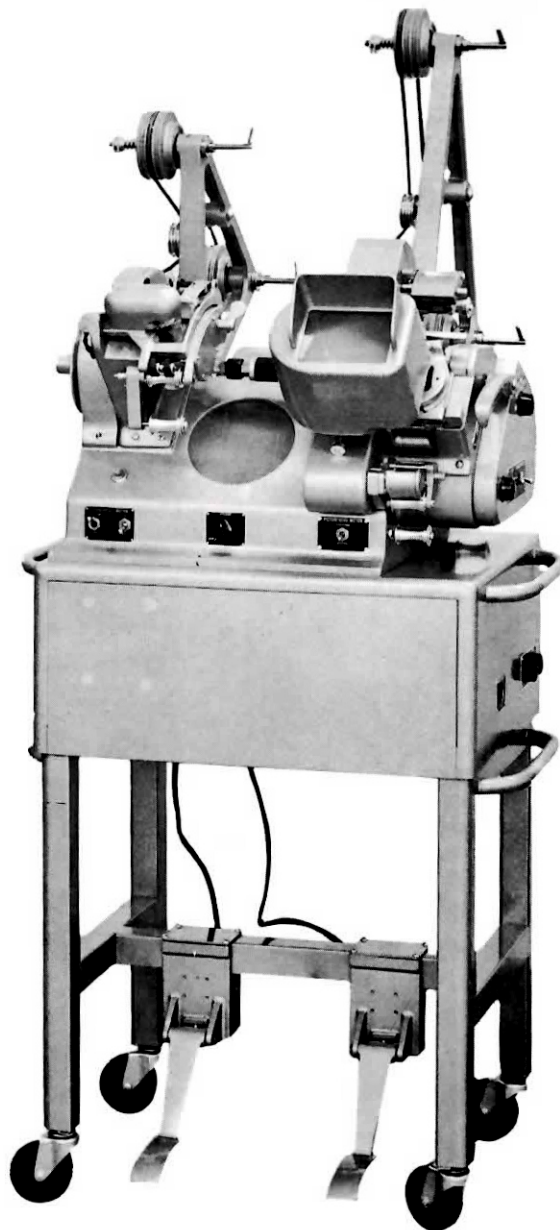
**"SERIES 20" FOR 16 OR 35 MM**

**PICTURE FILM • SOUND FILM • COMPOSITE FILM**

"Series 20" Moviola Editing Machines have gained world wide acceptance, not only for their quality of workmanship and reliability, but also for their streamlined styling and greater convenience of use.

The basic structure of the machine is smoothly finished cast aluminum. Heavy gauge steel sheet is used for the cabinet and stand. Corners and edges are neatly rounded to prevent film snags. The finish is a durable grey-green hammertone baked enamel.

The modular or building block design of the "Series 20" has proven to be of great benefit to Film Editors. Through proper selection of standard 16 mm and 35 mm components the machine that suits the Editor's exact requirements may be assembled. These requirements may vary from a table model for viewing short lengths of hand held picture film to a console sound model capable of running several individual picture and sound films in synchronism. Additionally, in the event it becomes necessary for the editor to change either picture or sound film size, comparable modular units in 16 mm and 35 mm may be readily interchanged.



Model UD-20-S (35 mm)  
Model UL-20-S (16 mm similar)

Model UL-20-CS (16 mm)  
Model UD-20-CS  
(35 mm similar)  
Counter extra

## MOVIOLA "SERIES 20" COMPONENTS

### COMPOSITE SOUND HEADS

A composite sound head is a unit which is attached to and becomes an integral part of a Moviola picture head equipped with reel spindles. Its purpose is to reproduce optical sound recorded on picture film.

The 16 mm composite sound head is available on special order to reproduce magnetic as well as optical sound.

A rotary stabilizer is employed in the film transport system to assure high sound quality.

### SEPARATE SOUND HEADS

The 16 mm heads will accommodate 16 mm single or double perforated magnetic film. The 35 mm heads will accommodate either 35 mm film or 35 mm and 17½ mm if ordered with special rollers.

Standard heads will reproduce either optical or magnetic sound track recorded on separate film.

The internal gearing is arranged so that sound film is transported in synchronism with either a 16 mm or 35 mm Moviola picture head.

Sound heads are designed to facilitate threading.

The film can be readily marked without opening the film gate.

Standard arrangement provides for magnetic head above film (magnetic coating up). Head can be easily adjusted across film for any track position or raised when optical sound is used.

An "Under-Mag" arrangement for magnetic head beneath film (magnetic coating down) is available on special order.

### PICTURE HEADS

Picture is viewed on a 3" x 4" self-contained rear projection screen.

Illumination is adequate for viewing in normally lighted room.

Threading is simplified since film is placed in the gate in the same orientation as it is to be viewed.

A lever is provided to frame picture on screen. Marking of film can be accomplished without opening film gate. Cine movement is by means of "Geneva" intermittent mechanism.

Single frame projection can be accomplished without overheating film.

Shutter is automatic and comes into action at about 20 frames per second. Drops out of action at slow speeds to eliminate severe flicker.

Manually operated brake permits stopping machine within a few frames.

The film slide and pressure plate are hard-chrome plated for maximum wear resistance.

### BODY AND CABINET ASSEMBLY

The body and cabinet assembly is the same whether for 16 mm or 35 mm heads.

The console body and cabinet assembly contains the projection lamp, variable and constant speed motors, amplifier and speaker, controls and switches.

The table model body assembly contains the projection lamp, variable speed motor, operating controls and switches.

Access doors are provided for projection lamp re-

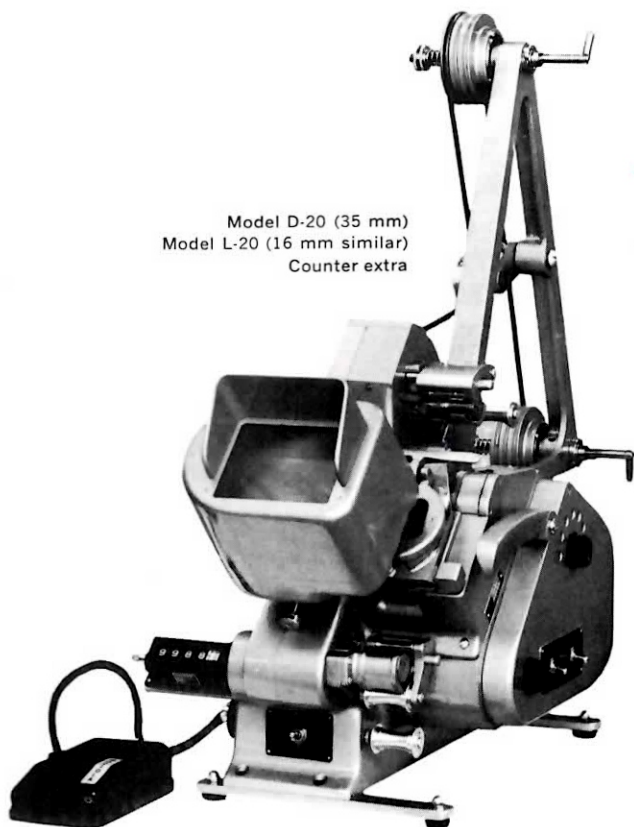
placement and for servicing motors and sound system.

Amplifier has 5 tubes, optical-magnetic selector switch, volume and tone controls, high frequency exciter lamp supply, equalization on magnetic track, and headphone jack. Facilities are provided for mixing sounds when the Moviola is equipped with two or more separate sound heads.

Console model body and cabinet assembly is mounted on a separate stand with casters. Foot controls are fastened to the front legs of the stand.



Model D-20 (35 mm)  
Model L-20 (16 mm similar)  
Counter extra



## TABLE MODELS

Picture viewers are available in table models. The standard picture head is mounted on a special aluminum body which houses the variable speed motor, projection lamp and necessary controls and switches. A power cable and foot controller with a 6 ft. cord are included.

Model UC-20-S (35 mm)  
Model UK-20-S (16 mm similar)



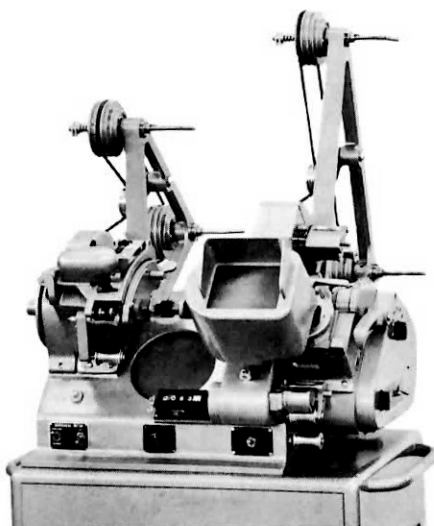
## MODELS WITHOUT REEL SPINDLES

For many editorial operations where short pieces of hand held film are involved, models without reel spindles are available. However, if the machine is intended to be used later with reels, it is advisable to get a model with reel spindles initially, since change-over requires extensive modification.

Illustration shows following optional extras:  
Counter, Lightwell, 4" x 5" Viewing Screen  
and film bag with frame.



Model SL-20-H  
(16 mm Sound Head)  
Interchangeable  
with SD-20-H (35 mm)



Model UD-20-S  
Counter extra

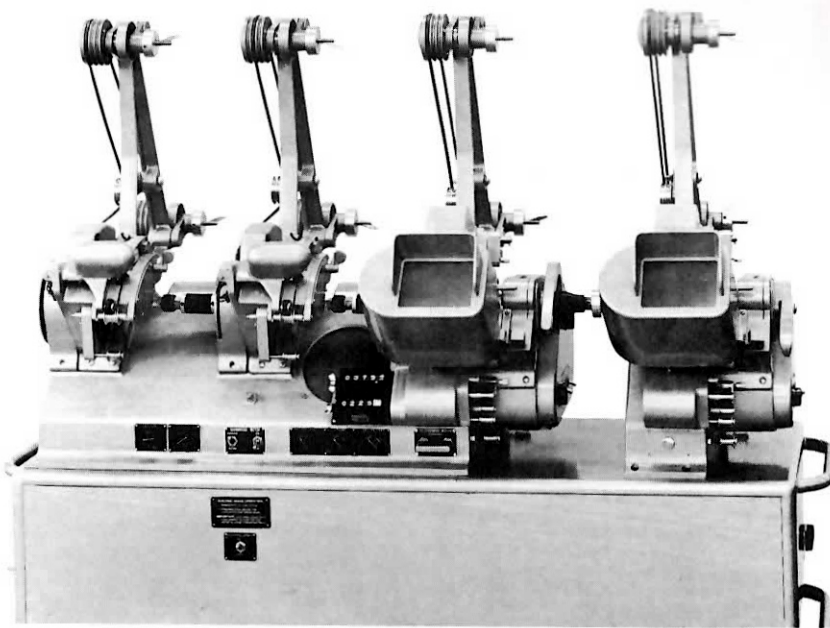


Model L-20-H  
(16 mm Picture Head)  
Interchangeable  
with D-20-H (35 mm)

## INTERCHANGEABLE PICTURE AND SOUND HEADS

Versatility of the "Series 20" modular design permits easy interchange of 16 mm Picture and Separate Sound Heads with corresponding models in 35 mm. The design permits a 35 mm Picture Head to operate in synchronism with a 16 mm Sound Head and vice versa.





Model U2L-20-2S equipped with dual footage and seconds Counter and Electric Brake.

### SPECIAL MACHINES

Special Machines can be made up of any combination of 16 mm and 35 mm Picture and Sound Heads.



Moviola protected by moisture proof, vinyl Dust Cover.

### ORDERING DESIGNATIONS

The table below is for your convenience in ordering the Moviola to fit your requirements. If you wish further help in selecting your components, we will be happy to advise you.

Model		Picture Head 3"x4" Screen	Composite Sound Head	Separate Sound Head	†Reel Spindles	Variable Speed Motor	Constant Speed Motor	Table Model	Floor Model W/Sound
16 mm	35 mm								
K-20	C-20	●				●		●	
L-20	D-20	●			●	●		●	
UK-20-S	UC-20-S	●		●		●	●		●
UL-20-S	UD-20-S	●		●	●	●	●		●
UL-20-CS	UD-20-CS	●	●	●	●	●	●		●

† Max. Reel Size: 16mm Picture Head — 15", Sound Head — 15"  
35mm Picture Head — 15", Sound Head — 10" — Bracket for larger reels available on special order.

Power Supply: 115 volts, 60 cycle, single phase is standard. When ordering, please specify if other power supply is desired.

### OPTIONAL EXTRA EQUIPMENT

Counters for:  
Feet and frames  
Seconds and tenths  
Frames only  
Hours, Mins and Secs  
Lightwell  
Electric Brake

Film bag and frame  
Transformer for 230 volts  
Synchronous motor drive  
Cinemascope adaptation on 35mm Picture Head  
17½ mm adaptation on 35mm Separate Sound Head  
\*Searching Head in place of Separate Sound Head  
Dust Cover, white vinyl

Headphones with cord and plug  
\*Large Screen, 4" x 5"- Model LGS  
\*Add-A-Sound Head Cabinet Extension  
\*Manual Search facility on Separate Sound Head  
"Under-Mag" on Separate Sound Head  
Magnetic sound on 16mm Composite Sound Head  
Single Frame Operation

\*See separate catalog pages describing these items.

# Search head

FOR 35MM AND 16MM MAGNETIC FILM

The Moviola Magnetic Search Head on an otherwise standard Series 20 or Preview Moviola enables the operator to accurately locate sounds and syllables and to synchronize them with the picture.

When it is desirable to pin-point a specific sound the Moviola is stopped. While the film is stationary the Search Head motor drives the magnetic pick-up back and forth at sound speed over a nine inch strip of the track. There are two Position Indicators within the nine inch span beyond which the sound is automatically cut out. The operator progressively shortens the range of sound by moving them together. In this manner the exact point is easily and quickly found.

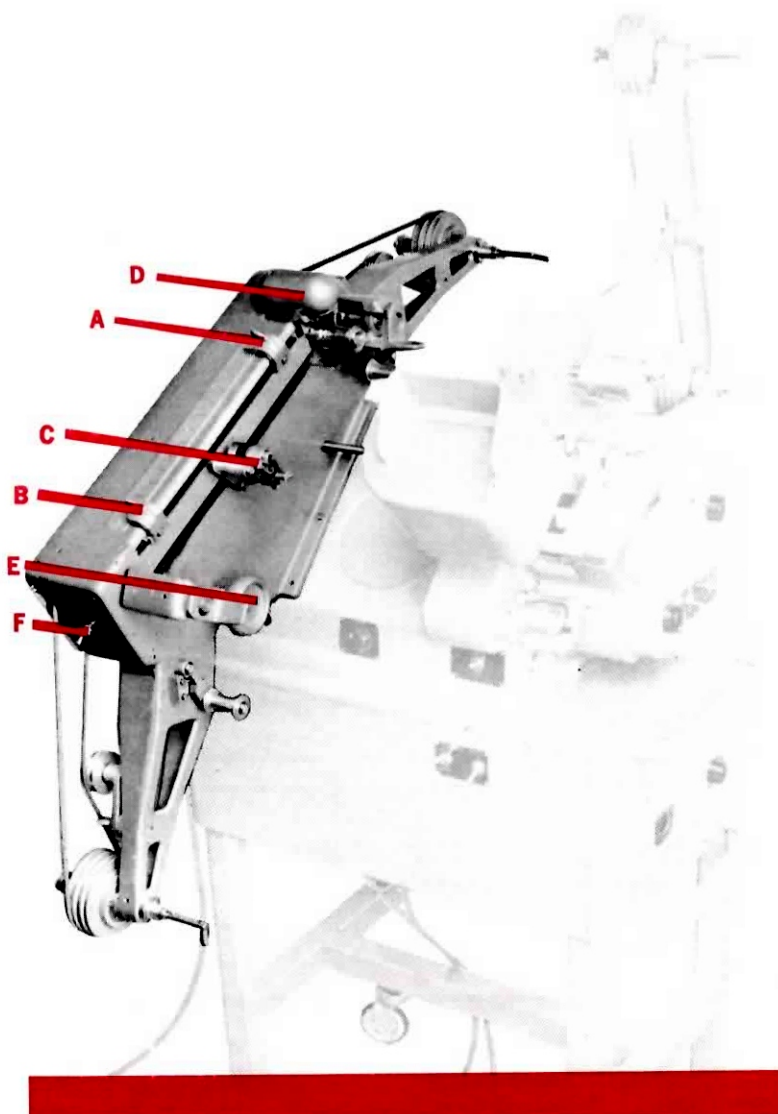
Another important feature of the Search Head is the time it saves. Accurate synchronization can be accomplished while the film is running through the Moviola. By means of a handwheel, the operator can advance or retard the sound to bring it into precise synchronization with the picture.

There is also an Optical Reproducer in a permanent, fixed, position on the Search Head. Either the optical or the magnetic system can be used as needed.

- A, B** Position Indicators — (A) indicates the beginning of a sound (B) indicates the end.
- C** Magnetic Pick-up — oscillates during searching operation and is stationary while Moviola is in normal use.
- D** Optical Reproducer — is fixed and is used for normal editing of optical sound film.
- E** Handwheel for adjusting Magnetic Pick-up (C) to synchronize the track with the picture while they are both in motion.
- F** Switch to set the Magnetic Pick-up (C) in motion for the search operation. This is done when the Moviola has been stopped.

Magnetic Film Search Heads are offered in two models — one for 16mm film and one for 35mm film. The standard models are provided with snap-in type film sprocket clamps for easy threading. A model for 17½mm film is available on special order.

The Search Head is a component that is interchangeable with or can be coupled to a Separate Sound Head of a Series 20 or a Preview Moviola.



Model UD-20-M (35mm)  
(Model UD-20-S with Search Head in  
place of Separate Sound Head)  
Model UL-20-M (16mm similar)

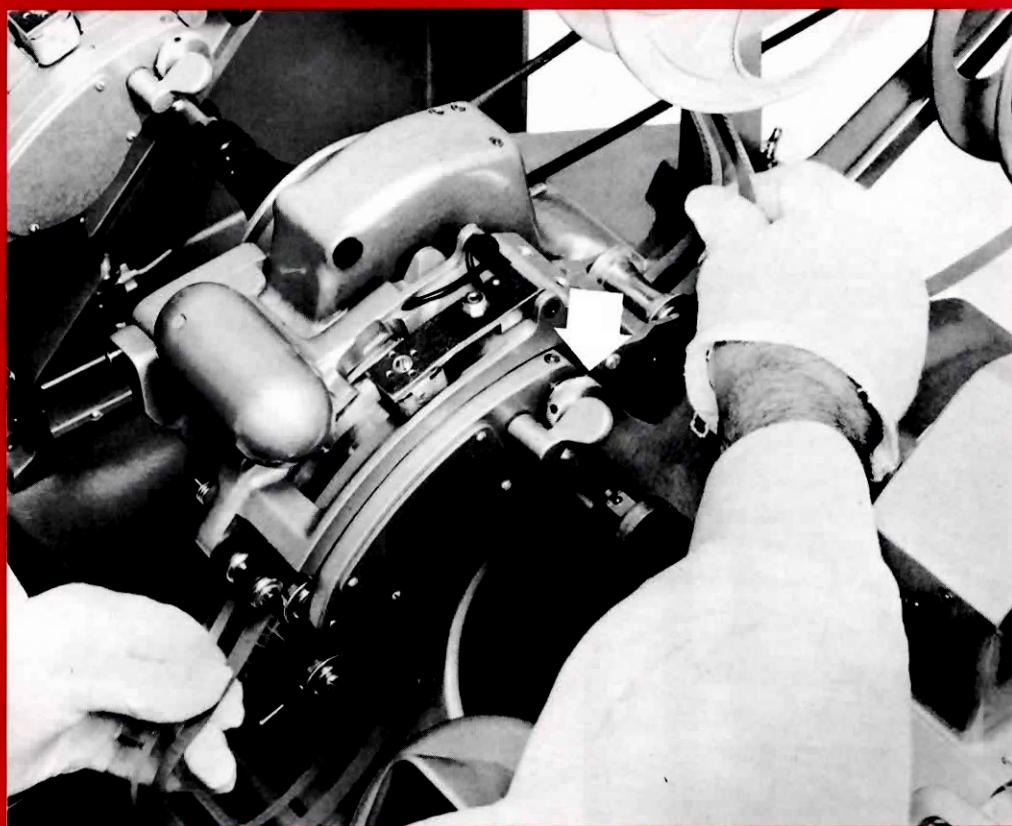
- A** is Position Indicator for beginning of word.
- B** is Position Indicator for end of word.
- C** is Magnetic Pick-up.
- D** is Optical Reproducer.
- E** is Handwheel for manually moving C.
- F** is Switch for motor drive of C.



# **M**anual search head **CONVERSION KIT**

MK-16 for 16mm • MK-35 for 35mm

**TO MODIFY YOUR MOVIOLA SOUND HEAD FOR RAPID SOUND TRACK SEARCHING**



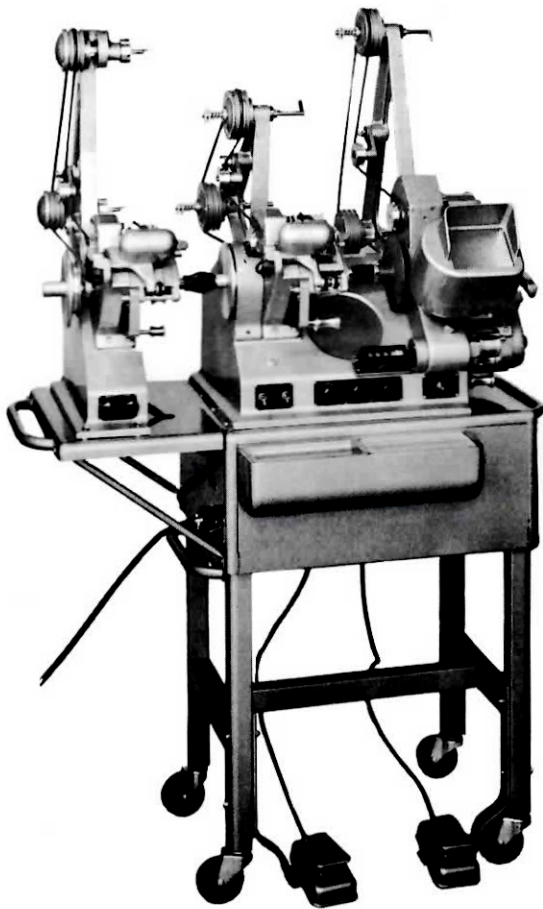
To operate, merely turn the Search Head control knob "out" to make the sprocket free wheeling. The film can then be moved past the pick-up head manually to quickly pin point hard to read sound effects, music or dialog. Turn the control knob "in" and resume synchronized operation.

This device is available as optional extra equipment on your new Moviola or it can be installed on your present machine from instructions furnished with each kit. No special tools required.



# Add a soundhead kit

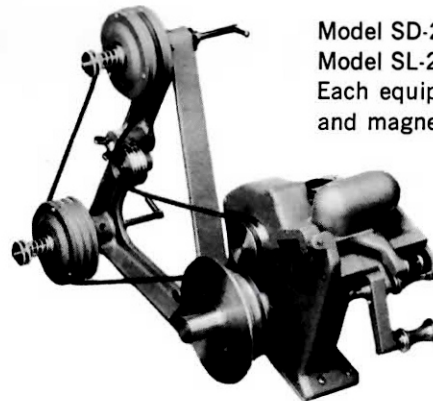
## FOR MULTIPLE SOUND TRACK EDITING



Model UD-20-S shown with CE-20 Cabinet Extension and Separate Sound Head, Model SL-20-H.



\* Model CE-20  
Cabinet extension  
bracket with mixing  
controls and coupling  
attachments  
complete.



Model SD-20-H (35mm) shown  
Model SL-20-H (16mm) similar  
Each equipped to play optical  
and magnetic sound track.

1. Provisions for separate magnetic volume control over each sound head.\*\*
2. Plug-in attachments to amplifier.
3. Strong, easy to install from furnished instructions.

\*\*For mixing magnetic sound tracks only. To mix optical sound tracks amplifier modifications are required. Contact factory for details.

\*For "Preview" models specify CE-Preview.

# Large screen kit for series 20 Moviolas

LGS-35 for 35mm LGS-16 for 16mm



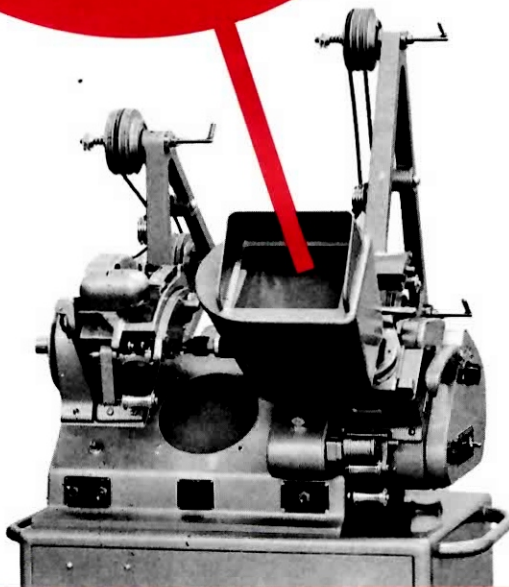
The model LGS Large Screen has twice the area of the standard screen and is a valuable addition to your Series 20 Moviola. "Lip sync" and other difficult syncing problems are much easier to solve with the added detail to be seen in the larger picture.

A Series 20 Moviola equipped with an LGS can be used as a screening device. The larger picture permits two or three people to view the film at one time.

The Large Screen Model LGS is available as optional extra equipment on a new Moviola. Or, if you have a Series 20 Moviola, the LGS can be furnished as an easy to install kit.

This device can be installed on any 35mm Series 20 Moviola.

**Note:** It will not fit 16mm Moviolas with serial numbers lower than 39709 without extensive modification. Consult factory for details.





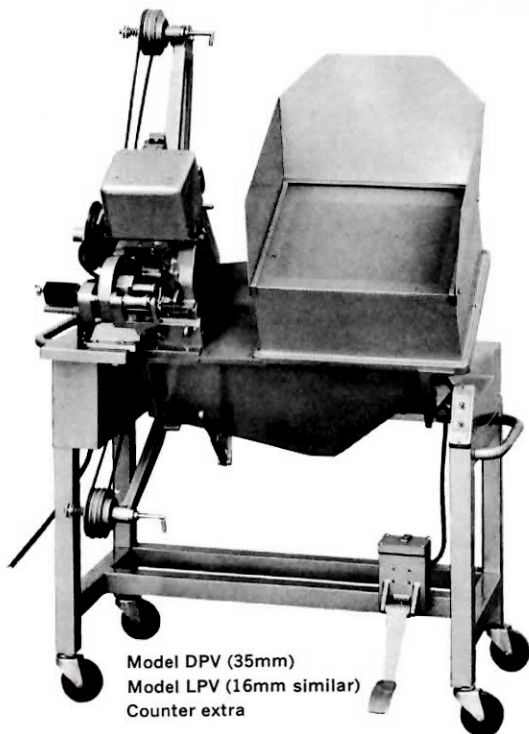
# Preview Moviola film editing machines

for 35mm and 16mm With and Without Sound Reproducing Equipment

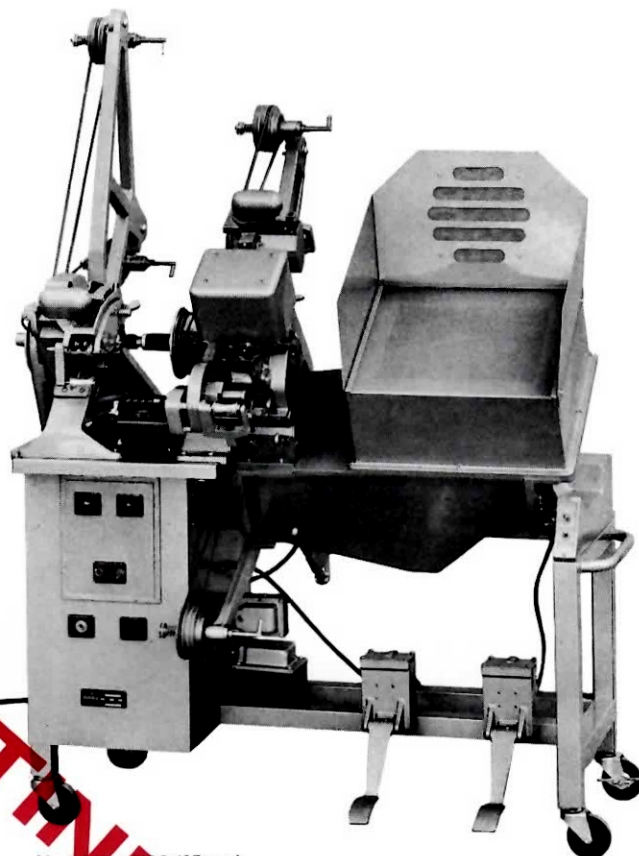
**PREVIEW MOVIOLA MACHINES** differ in basic design from other models of Moviola Film Viewing Machines in that the picture size is much larger. As many as five people may "preview" a film simultaneously. The large picture shows more detail which is particularly useful in "lip sync" and sound effect work, animation, and such special purposes as analyzing instrumentation data recorded on motion picture film.

Preview Moviola Machines consist of a picture head and sound heads (if with sound) mounted on a metal cabinet with casters which contains the amplifier and other parts necessary to make a completely equipped machine. Extra length cabinets are available for machines with more than one sound head. The machine is finished in grey-green baked enamel.

**PICTURE HEAD.** Cine movement of film is by means of a "Geneva" intermittent mechanism. The head is easy to thread since the film is applied in the same orientation as for direct viewing. All models are equipped with a newly designed lamp house that produces four times the illumination of prior models. Room lights need not be dimmed for viewing.



Model DPV (35mm)  
Model LPV (16mm similar)  
Counter extra



Model UDFVCS (35mm)  
Model ULPVCS (16mm similar)  
Counter and 250 v. transformer extra

The projection lamp house is hinged for ready access to the film for marking without opening the film gate. Still frame projection can be accomplished without overheating the film.

**SHUTTER** is of the barrel type. It may be disconnected and left in the open position to avoid flicker at slow speeds, or reconnected without disturbing the timing.

**FRAMING.** In machines for 35mm film, framing of the picture in the aperture is accomplished by a lever on the gate. In machines for 16mm film a screw adjustment is provided. Accurate framing of the picture on the screen is provided by a lever on the mirror case.

**GLASS SCREEN** is especially prepared for rear-projection and measures about 12" x 14". The image is approximately 8" x 10" for both 35mm and 16mm



machines. A screen shade is provided which also supports the speaker when the machine is equipped for sound.

**MIRRORS** are front surface coated plate glass and are completely encased to protect them from dust.

**COMPOSITE SOUND HEAD.** The composite sound head is attached to and becomes a permanent part of the Preview Moviola Picture Head. It reproduces optical sound only recorded on picture film. A 16mm Composite Sound Head is available on special order to reproduce magnetic as well as optical sound.

**SEPARATE SOUND HEADS** will reproduce either optical or magnetic sound track recorded on separate film. The 16mm heads will accommodate 16mm single or double perforated magnetic film and 35mm heads will accommodate either 35mm film or 35mm and 17½mm if ordered with special rollers. Standard arrangement provides for magnetic head above film (magnetic coating up). Head can be easily adjusted across film for any track position or raised when optical sound is used. An "under-mag" arrangement is available on special order.

**REEL SPINDLES.** All film heads are equipped with reel spindles which accommodate 15" dia. reels for 35mm, or 14" dia. reels for 16mm. The take-up and hold-back actions reverse automatically when the machine is run backward.

**MOTOR DRIVES.** Machines for picture only without sound are equipped with a variable speed motor only, while those with picture head and one or more sound heads have two motors. The variable speed motor drives the picture head and the constant speed motor drives the separate sound heads. Both motors are reversible and can be operated either by hand or by foot control. The constant speed motor transports the film close to sound speed. For exact sound speed, a synchronous motor drive can be installed on special order. The two motor system and interlock arrangement between heads permits the picture head to be run alone at variable speed, or one or more sound heads to be run at constant sound speed without the picture head. Or, the combination of picture head and one or more sound heads can be run either by the variable or constant speed motor.

**SOUND EQUIPMENT** consists of a five tube amplifier with optical magnetic selector switch, volume and tone controls, high frequency exciter lamp supply, equalization on magnetic track, head phone jack and a 6" speaker. When two or more separate sound heads are provided, the sound from all can be mixed.

**SPECIAL PREVIEW MACHINES** can be made up by mounting various combinations of 16mm and 35mm separate sound heads in conjunction with either a 16mm or 35mm Preview Picture Head with screen.

#### ORDERING DESIGNATIONS

The table below is for your convenience in ordering the Preview Moviola to fit your requirements. We will be happy to advise you if assistance is needed in making your selection.

MODEL		Picture Head	Composite	Separate	Variable	Constant
35mm	16mm	8" x 10" Image	Sound Head	Sound Head	Speed Motor	Speed Motor
DPV	LPV	•			•	
UDPVC	ULPVC	•	•		•	•
UDPVS	ULPVS	•		•	•	•
UDPVCS	ULPVCS	•	•	•	•	•
UDPVC2S	ULPVC2S	•	•	••	•	•

Power Supply: 115 volts, 60 cycle, single phase is standard.  
When ordering please specify if other power supply is desired.

#### OPTIONAL EXTRA EQUIPMENT

Counters for: Feet & Frames, Seconds & tenths  
Transformer for 230 volts  
Synchronous Motor Drive  
Animation modification for 9" x 12" cells  
complete with acme registration pegs  
Film Bag and Frame  
Single Frame Facility  
Electric Brake

Headphones (with cord and plug)  
17½mm adaptation for 35mm Separate Sound Head  
Magnetic sound on 16mm Composite Sound Head  
Under-Mag on Separate Sound Head  
\*Magnetic Search Head in place of Separate Sound Head  
\*Add-A-Sound Head Cabinet Extension  
\*Manual Search Head for Separate Sound Head

\*See separate catalog pages describing these items.

# **S**ound readers

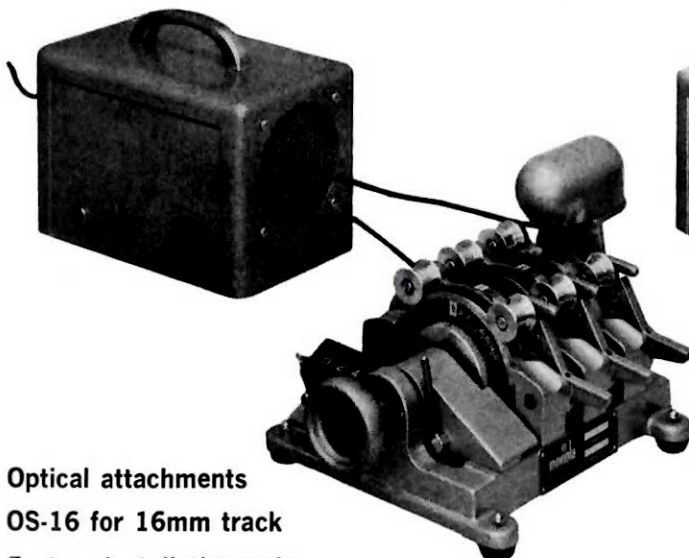
FEATURING THE VERSATILITY OF SEPARATE COMPONENTS

OPTICAL TRACK • MAGNETIC TRACK • COMBINATION OPTICAL & MAGNETIC

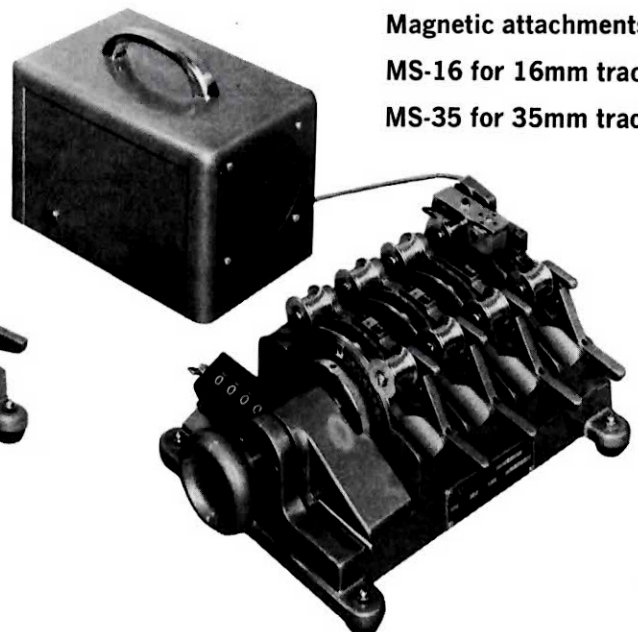


## **MOVIOLA SYNCHRONIZER—SOUND READER ADAPTATIONS**

See page 23 "Special Synchronizers" for additional information



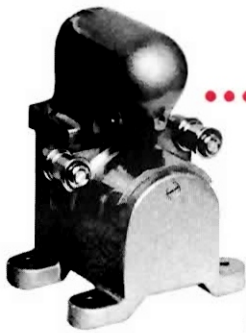
**Optical attachments**  
**OS-16 for 16mm track**  
**Factory installation only**



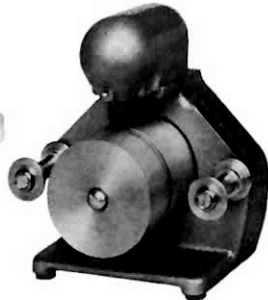
**Magnetic attachments**  
**MS-16 for 16mm track**  
**MS-35 for 35mm track**



## OPTICAL SOUND READERS



..... SRO-35mm      SRO-16mm



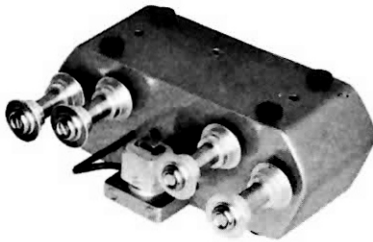
For the user whose requirements are for reading just one medium. Reads left to right or right to left,

**SRB-35mm, 16mm, 35-32mm**

Moviola's versatile optical sound reader. Accommodates all the above media. Reads left to right, right to left, emulsion up or down.

## MAGNETIC SOUND READERS

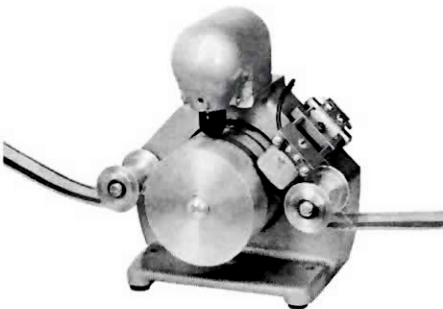
**SRM-35mm      SRM-16mm**



For the user whose requirements are for reading just one magnetic medium. Reads left to right or right to left, magnetic coating up or down.

**SRM-MAGNETIC, 35mm, 16mm, 17½mm**

Moviola's versatile magnetic reader accommodates all of the above media. Reads left to right, right to left, magnetic coating up or down.



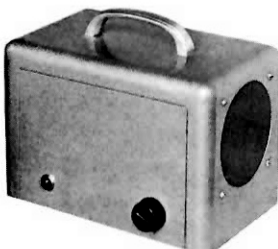
## COMBINATION SOUND READER

**SRC** { **OPTICAL-35mm, 16mm, 35-32mm**  
**MAGNETIC-35mm, 16mm, 17½mm**

Moviola's completely versatile sound reader for both optical and magnetic track. It will read all media listed above, left to right, right to left, emulsion or magnetic coating up or down.

## AMPLIFIER — SPEAKERS (for all Moviola Sound Readers)

### MODEL URS



1. Optical or magnetic sound
2. 3 tubes
3. 4" speaker
4. Volume control
5. Headphone jack

### MODEL UROM



1. Optical or magnetic sound
2. 5 tubes
3. 6" speaker
4. Volume control
5. Headphone jack
6. Equalization on magnetic track
7. Optical-magnetic selector switch
8. Tone control
9. High frequency exciter lamp supply

DISCONTINUED



# Rewinders

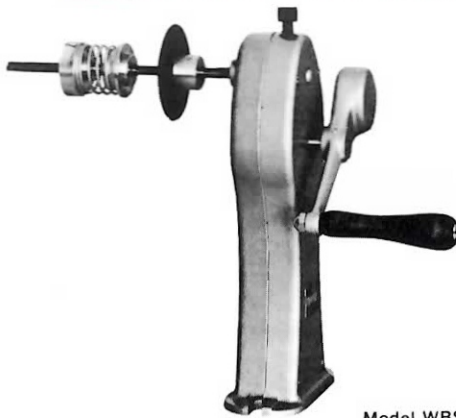
## "SERIES W"

*designed for professional use, and feature:*

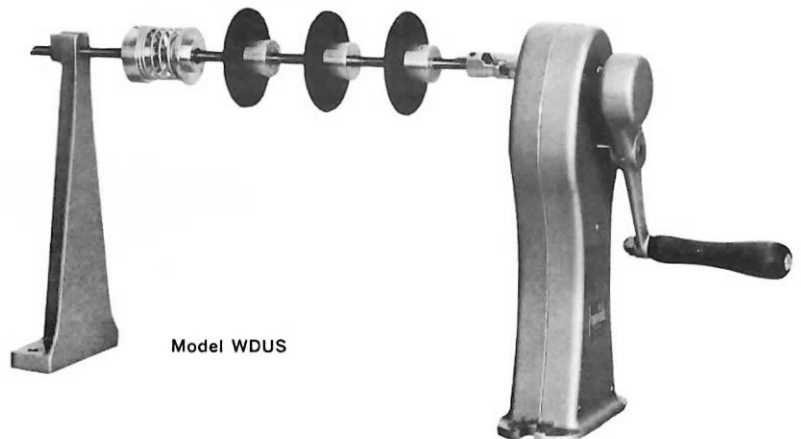
- ▶ Cast Aluminum housing
- ▶ Spindles mounted on ball bearings
- ▶ Machine cut gears, ratio of 1 to 4
- ▶ Capacity for 18" diameter reels
- ▶ Optional Friction Drag on spindle
- ▶ Spindles easily changed without tools
- ▶ Titewind Attachment available
- ▶ Video Tape Rewind



Model WA



Model WBS  
Friction Drag extra



Model WDUS

Standard models range from 1-reel units to those with a hinged shaft for 4 reels. Models to accommodate more reels are available on special order. Models WCS-35 and WDS-16 have rigid shafts and can accommodate 3—10" dia. 35mm reels and 4—14" dia. 16mm reels, respectively, if reasonable care is exercised. For heavy duty service the WDUS models, which have a hinged shaft and an end support, are recommended.

On the multiple reel models the first reel

is driven by the shaft key and the other reels are driven by friction disc spacers. The 16mm and 35mm spacers are of such a length that the reel spacing matches that of Moviola Synchronizers (1¾ centers on 16mm and 2¼ centers on 35mm Synchronizers).

A Spring Clamp unit is provided to maintain desired pressure between the reels and spacers. It features a quick-acting release and clamp, with no thumb screws or projections.



Model WV

## Video Tape Rewinders

The model WV rewriter is made especially to accommodate standard video tape reels. A unique, quick clamping arrangement on the hub permits installation or removal of the reel without dismantling the hub.

## Video Tape Adapter

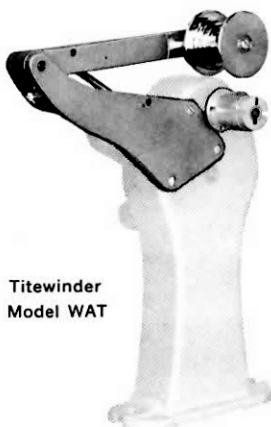
Part No. 71243-1

Any standard Moviola rewind equipped with a Video Tape Reel Hub Adapter, will accommodate the video tape reel.

## Titewind Attachment

Part No. 71226

This attachment mounted on a Model "W" Rewinder permits winding film tightly on a raw stock core without the danger of scratching the film. The attachment mounted on a "WA" Rewinder makes a "WAT" Titewinder.



Titewinder  
Model WAT

## Swivel Base Part No. 71600

With this device a rewriter can be rotated 360° and locked firmly at any position. Mounting holes match standard rewriter holes.



Model WA-35BL

## Elbow Brake

A Moviola Rewinder equipped with Elbow Brake provides the operator with mechanical means of braking the supply reel during high speed rewinding. If an Elbow Brake is required on the left hand rewriter, add "BL" to the model designation. For the rewriter on the operator's right, add a "BR."



## Leader Stanchion

Part No. 71258

Easily installed —  
no drilling or  
tapping required.

SPRING CLAMP  
PART NO. 71115

16mm SPACER  
PART NO. 71128

35mm SPACER  
PART NO. 71125

FRICTION DRAG  
PART NO. 71237

CORE ADAPTER  
PART NO. 71144

SINGLE REEL  
16mm — PART No. 71229  
35mm — PART No. 71210

2-REEL AND 3-REEL 16mm  
2-REEL 35mm  
PART No. 71211

3-REEL 35mm  
4-REEL 16mm  
PART No. 71212

4-REEL 16mm and 35mm — PART No. 71213  
END SUPPORT FOR #71213 SHAFT — PART No. 71216

MODEL DESIGNATION	No. of Reels Accommodated
WA-16	1-16mm
WA-35	1-35mm
WBS-16	2-16mm
WBS-35	2-35mm
WCS-16	3-16mm
WCS-35	3-35mm
WDS-16	4-16mm
WDUS-16	4-16mm
WDUS-35	4-35mm

All models include necessary Spacers and Spring Clamp. Models WDUS are supplied with an end support.

If Spacers and Spring Clamp are not required, omit letter "S" and film size in Model designation when ordering.



# Moviola power rewinders

for 16mm, 35mm, 70mm films or Video Tape

## TO SAVE SPACE, TIME, FILM DAMAGE

Moviola's Model APR represents a new concept in power rewinding. It saves space and time and avoids film damage that often occurs during tedious manual rewinding. Because of the vertical arrangement of supply and drive spindles the APR requires less than half the space of the conventional left to right set-up. Yet when requirements call for careful foot-by-foot film inspection, the versatile Model APR can be operated in the conventional manner.

The Model APR winds from or to any combination of cores and reels faster than previously thought practical. By applying precision manufacturing techniques Moviola has produced a power rewind with balance characteristics that make high speeds possible. Up to 3000 feet of 35mm film can be rewound smoothly and safely in less than 1½ minutes. The Model APR's built-in film tension regulator assures a compact wind near the hub as well as at the outer diameter. Reels will contain the footage intended. Cored film is sufficiently tight to permit handling without worry of center "drop out."

The APR sets the operator free to do other things during the rewind cycle. If there is a break in the film an automatic sensing mechanism and an electric brake prevent damage from a "runaway" supply reel.

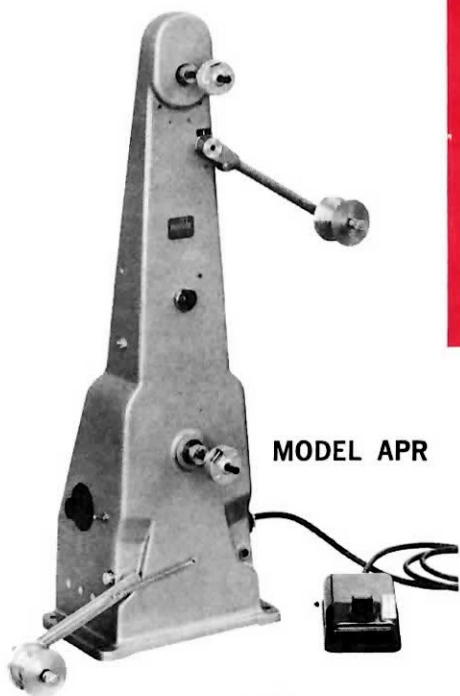
### DESIGN FEATURES

Two aluminum castings accurately machined and bolted together form the body of the APR which is finished in durable grey-green hammer-tone baked enamel.

The lower section houses a Universal Motor which drives the lower spindle through a V-belt. Speed may be controlled either by hand rheostat or foot controller. A reversing switch on the motor permits direct or reverse film or tape wind as required.

The upper section supports the supply spindle which is equipped with a friction device that applies a drag proportional to the weight of film or tape and reel. In this manner near constant tension is maintained throughout the automatic winding cycle. If the spring loaded sensing roller between the reels is released either because of an unexpected break or the film or tape end, an electric brake is applied to the supply spindle and the power to the motor is turned off automatically.

For ease and speed of handling reels on and off the machine, a quick-acting clamp with push button release has been designed which slides on the spindle and automatically locks in place.

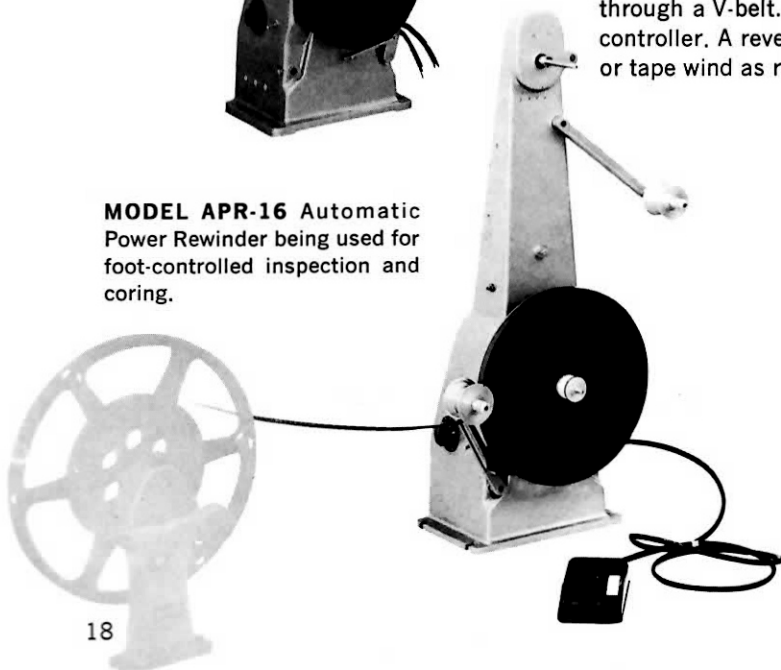


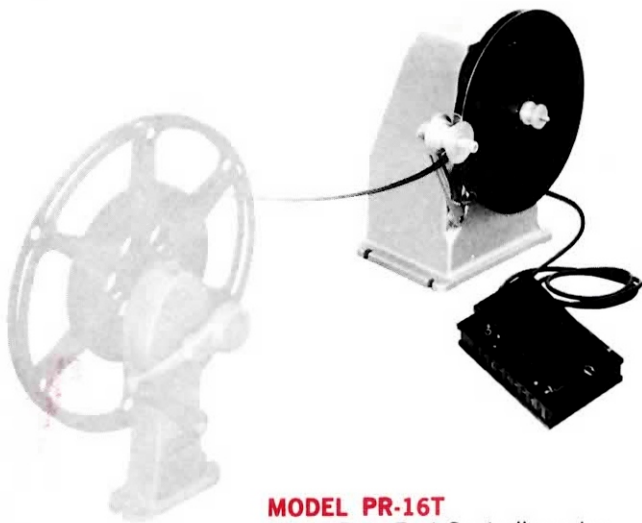
**MODEL APR**

**MODEL APR-35**  
Set for automatic  
coring 3000' of film.



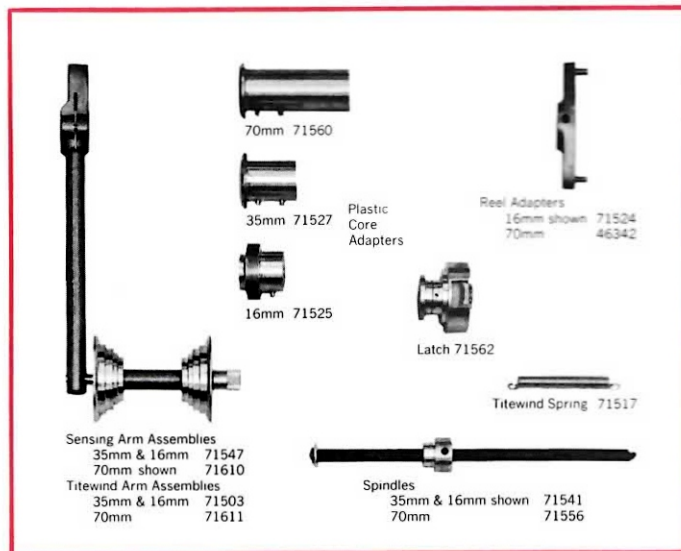
**MODEL APR-16 Automatic  
Power Rewinder** being used for  
foot-controlled inspection and  
coring.





**MODEL PR-16T**  
Heavy Duty Foot Controller extra

If requirements are for conventional left-to-right operation only, the Moviola PR Series Power Rewinder is recommended. For unusual power requirements the heavy duty foot controller shown (part no. 1199) may be ordered in place of the standard controller or as a separate unit.



#### MODEL DESIGNATIONS

16mm film  
35mm film  
16 & 35mm film  
70mm film

#### Automatic

Power  
Rewinders\*  
APR-16  
APR-35  
APR  
APR-70

Power  
Rewinders\*\*  
PR-16  
PR-35  
PR  
PR-70

\* Titewind attachment included.  
\*\* Titewind attachment extra, add "T" to model designation if required.

**MODEL APR-VT**



#### POWER REWINDERS FOR VIDEO TAPE

When utilized in the automatic manner, the APR-VT will relieve an overworked and expensive video tape machine of the routine and time consuming rewinding chore. It will handle one hour of program material (4500 ft.) in less than four minutes. All parts are made and assembled to exacting tolerances to insure proper tape alignment.

The reel-weight drag principle built into the APR-VT maintains a constant tape tension of about 20 ounces throughout the automatic winding cycle. Tape is threaded through the machine in such a manner that the magnetic coating side is not contacted. Tape may be rewound as many times as desired without affecting the video signal or the condition of the tape. Protection against a runaway supply reel is provided by the spring loaded sensing roller. When released it actuates a brake and turns off the motor.

If requirements are for bench inspection, splicing, or sound reading, the APR-VT may be operated at variable speed by either the built-in hand rheostat or the foot controller. If the automatic feature of the APR-VT is not required the less expensive Model PR-VT is recommended.



# Differential gear rewinders

TO SIMPLIFY THE TASK OF MULTI-FILM SYNCHRONIZING



## FUNCTION

When two, three, or four films are being synchronized, as in the illustration above, the reels will revolve at different speeds. The difference in reel speeds results from the variation in diameter of film build-up on each reel.

Conventional rewinds, with friction driven reels on a single shaft, require frequent manual re-adjustment of reels to take up film slack or to halt reel runaway.

Unlike conventional rewinds, the Moviola differential gear principle provides for the transmission of positive, non-slip driving or braking torque equally to each reel regardless of its speed of rotation. The Moviola Differential Gear Rewinder makes the job of synchronizing films simpler for the operator and easier on the film because of its inherent torque equalizing characteristics.



RHB-1L

(1000 foot reels)



RHB-1R

## FEATURES

The **Drive Crank** is designed to disengage from the driven mechanism to permit free-wheeling or spinning of the reels in a manner similar to conventional rewinders.

**Locking Devices** are provided so that all reel spindles may be positively driven at the same speed if desired. The locking feature makes possible rewinding a single reel of film on the two-reel rewind, or one, two, or three reels only on the four-reel models.

The **brake** is designed so that by depressing a lever, braking action is applied through the differential units as uniformly to each reel as driving torque is transmitted from the crank.

## REWINDER SIZES

The two-reel differential gear rewinders are manufactured in two sizes:

- (1) Model RHB-1 is for use with reels up to 10" diameter (1000 ft. capacity).
- (2) Model RHB-2 can be used for reels up to 15" diameter (2000 ft. capacity).

The four-reel rewinders, Model RHD-1, are made in one size only, to accommodate reels up to 10" diameter. Reel spacing on the differential gear rewinders is arranged to conform with the spacing on Moviola synchronizers that may be used in conjunction with the rewinders.

## SPECIAL MODELS

Although this brochure describes differential gear rewinders for use with 35mm film only, similar rewinders can be furnished for 16mm or 17½mm films. The price for the special models is the same as the corresponding 35mm rewinders.



RHB-2L

(2000 foot reels)



RHB-2R

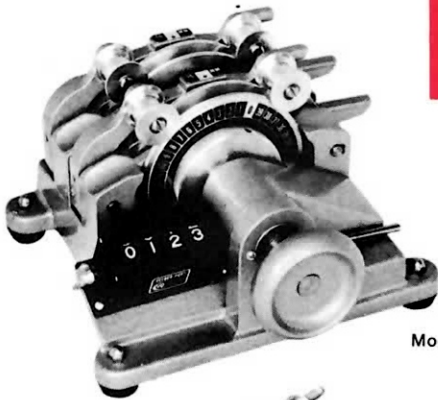
MODEL	MAXIMUM NUMBER OF REELS	MAXIMUM DIAMETER OF EACH REEL	FOR USE ON LEFT OR RIGHT SIDE OF OPERATOR	APPROXIMATE SHIPPING WEIGHT POUNDS
RHB-1L	2	10 INCHES	LEFT	14
RHB-1R	2	10 INCHES	RIGHT	14
RHB-2L	2	15 INCHES	LEFT	17
RHB-2R	2	15 INCHES	RIGHT	17
RHD-1L	4	10 INCHES	LEFT	32
RHD-1R	4	10 INCHES	RIGHT	32

Rewinders will be equipped with spindles for 35mm. film reels unless otherwise specified.  
When ordering a single rewriter indicate whether it is to be used on the right or left side by the operator.

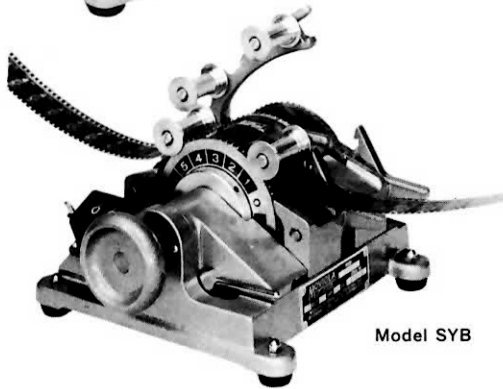


# Synchronizers

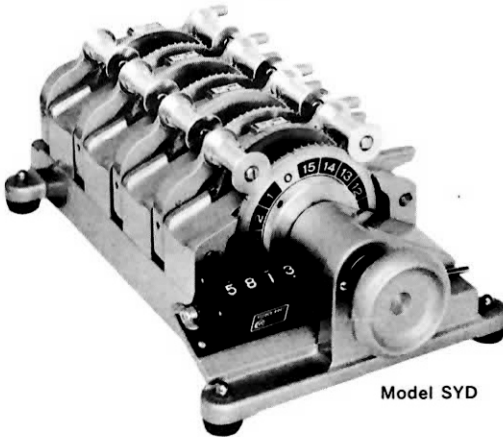
Precision machines that measure and synchronize motion picture films



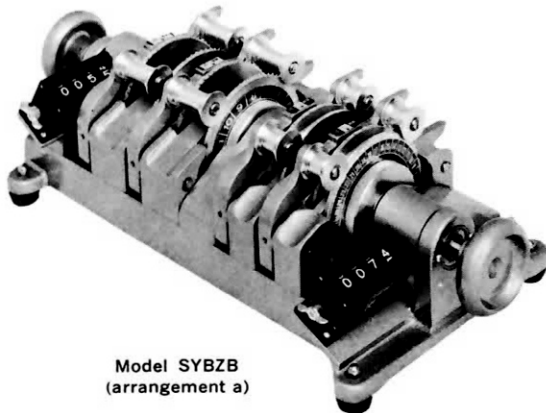
Model SZB



Model SYB



Model SYD



Model SYBZB  
(arrangement a)

## OPERATION

To simplify the Film Editor's task, Moviola's Synchronizers feature easy reading, easy operating characteristics. Sprockets on both 16mm and 35mm models are sized so that one revolution of the sprocket measures one foot of film. The counter indicates the number of sprocket revolutions or feet of film. Located on the first sprocket is a dial which counts the number of frames within each foot of film. Sixteen mm synchronizer dials read from 0 to 39, and correspondingly, 35mm dials read from 0 to 15. These dials can be rotated with respect to the sprockets to read zero at any desired frame. Also, the counters can be reset to zero to conform with zero dial settings. Counters "add" as film passes through synchronizer from "Left to Right." "Right to Left" operation available on special order. Film is held in positive engagement with the sprocket by two rollers mounted on a single hinged roller arm. Pushing a retaining latch allows a spring to raise the roller arm for placement and removal of film. Moviola Synchronizers are equipped with lever operated detent type brakes to position the sprockets at any desired frame.

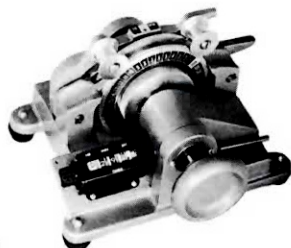
## COMBINATIONS for 16mm and 35mm FILMS

A gear train is provided between the 16mm and 35mm sprockets so the 16mm and 35mm films are synchronized by frames. Combination machines are equipped with two counters, one reading feet of 16mm film and the other reading feet of 35mm film. Frames are counted by referring to dials on the first 16mm and the first 35mm sprockets. The gear train can be disengaged by shifting a lever. With the gear train to disengaged, the 16mm sprockets and counter can be operated independently from the 35mm.

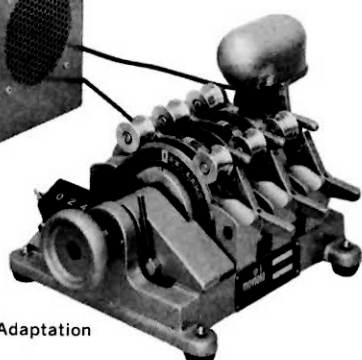
## CONSTRUCTION

- Strong cast aluminum frame with open base to permit illumination of film when operated over a light well.
- Main shaft turns on sealed, precision, ball bearings.
- Film retaining rollers equipped with self-lubricating bearings.
- Means provided for precise adjustment of space between rollers and sprockets.
- All parts accurately machined for interchangeability.
- Durable baked enamel and corrosion protective finishes.

Program Timer



Magnetic Sound Adaptation



Optical Sound Adaptation

## SPECIAL SYNCHRONIZERS

Synchronizers to fit your special requirements will be made to order. Following are some of the needs we have filled:

- Counter to count frames only.
- Counter to count seconds and tenths (referred to sound speed).
- "Program Timer" (illustrated) to read seconds—minutes—hours directly. No conversion tables necessary. Counter adaptable to all Moviola Synchronizers.
- Counters added to existing Synchronizers — contact factory for details.
- Clutch to disengage shafts between specified sprockets.
- Sprockets and adjustable width rollers for 35mm or 17½mm (split film).
- Sprockets for 35/32 (35mm film perforated double 16mm).
- Synchronizers adapted to reading Magnetic Sound (illustrated) with pick-up head mounted either above or underneath the film.
- 16mm Synchronizers adapted to reading Optical Sound (illustrated)—sprocket farthest from the operator only.
- Teeth nearest operator (16mm) on special order.

	MODEL	SPROCKETS
FOR 35mm FILM	SYA	1
	SYB	2
	SYC	3
	SYD	4
	SYE	5
	SYF	6

	MODEL	SPROCKETS
FOR 16mm FILM	SZA	1
	SZB	2
	SZC	3
	SZD	4
	SZE	5
	SZF	6

Standard arrangement for 16mm sprockets is with teeth farthest from the operator. Specify if teeth nearest the operator is desired.

### COMBINATION SYNCHRONIZERS for 16mm & 35mm FILMS

MODEL	35mm SPROCKETS	16mm SPROCKETS
SYAZA	1	1
SYAZB	1	2
SYAZC	1	3
SYBZA	2	1
SYBZB	2	2
SYCZA	3	1

**IMPORTANT:** add "-a" or "-b" to the model designation for the arrangement desired (e.g. SYAZA-a):

Arrangement	-a	16mm sprockets nearest operator
		35mm sprockets farthest from operator
	-b	35mm sprockets nearest operator
		16mm sprockets farthest from operator



# **70 mm viewer**



## for motion picture film

SCREEN & IMAGE SIZE	<p>Screen: 12" high, 14" wide, rear projection type.</p> <p>Image: Approximately 10" x 10" when projected from the standard 2¼" x 2¼" format. To permit viewing of timing and correlation marks on film edges, the aperture is wide enough to view the entire 70mm film width.</p>
FRAME SIZE	<p>The standard viewer is equipped to handle ten perforation advance of A.S.A. Type I film (.234" tooth pitch). *Special viewers can be made to accommodate five or four perforation advance, or A.S.A. Type II film (.187" tooth pitch).</p>
FILM TRANSPORT SYSTEM	<p>A variable speed motor transports the film in forward or reverse direction. Film can be viewed either in single frame or cine mode. Cine mode is accomplished by means of a "Geneva" type intermittent mechanism. Speed can be varied from 0 to approximately 140 linear feet per minute, either by manual or foot control.</p>
FILM GATE	<p>Glass plates are provided to flatten film automatically during single frame operation. On cine operation, glass plates are retracted and remain inoperative with film held down by rail pressure applied in perforation area. Individual frames can be exposed for marking.</p>
FOOTAGE	<p>Handles up to 1000 feet of film. Frames counter provided as standard equipment.</p>
PROJECTION SYSTEM	<p>Employs a pefocus type projection lamp cooled by an air blower to prevent film damage from lamp heat. Ample screen brilliance for viewing in a lighted room. Controls for regulating illumination provided.</p>
APPROXIMATE DIMENSIONS	<p>31" wide, 26" deep, 60" high. From floor to center line of screen 39" (console model). 31" wide, 26" deep, 37" high (table model).</p>



# Crab dolly

FOR MOTION PICTURE AND TELEVISION CAMERAS



*the best  
in mobility*

**Acceptance of the MOVIOLA CRAB DOLLY for motion picture and television cameras is world wide as evidenced by unsolicited testimonials.**

Users have learned through experience that the Moviola Crab Dolly provides a mobile platform for their camera that can be precisely positioned with more facility and speed, and with greater accuracy than any other type of camera support.

The noiseless, gliding, operation of the Moviola Crab Dolly doesn't interfere with sound takes. Interesting moving shots need not be sacrificed because they coincide with dialog. Nor do the actors have to be called back for re-recording sessions. It also eliminates the extra editing, lip sync, and dubbing problems that this entails.

Regardless of the shot — moving or static — all people engaged in the creative phases of the industry recognize that production values are enhanced by the use of the Moviola Crab Dolly.

## STEERING

Selected by control on steering column. No limits on rotation of steering column.

- A Crab steering—All wheel spindles turn through same angle.
- B Conventional steering—Wheel spindles at front (camera end) fixed. Wheel spindles at rear turned by compensating mechanism so that wheels track perfectly. No tire squeaking.
- C Locked—All wheel spindles locked with wheels parallel to length of chassis.

## BOOM

Located off chassis centerline for better dolly balance. Thumb screw adjusted plate at top for easy camera leveling. Raised or lowered by hydraulic cylinder with fluid pressure supplied by accumulator. Accumulator charged by hand pump or 115 volt AC-DC electric pump. Quiet operation permits elevating or lowering boom during shooting.

## SEATS

Two furnished seats can be mounted in 4 positions on the chassis and 2 positions on the boom. Seat mounted on boom to reduce operator fatigue.

## CHASSIS

Rugged yet lightweight aluminum construction. Eight ball-bearing wheels with 10" O.D. pneumatic tires. Floor lock to hold dolly in place.

## MAINTENANCE

Lubrication and adjustments infrequently required and easily accomplished.

## DIMENSIONS

Length	64"	Width	34"
Maximum height of boom	60"		
Minimum height of boom	22"		
Weight	510 lbs.		

## OPTIONAL EQUIPMENT

Hi-hat, 9", can be used for additional boom height. Side boards, 12" wide, fit into sockets provided in dolly chassis.



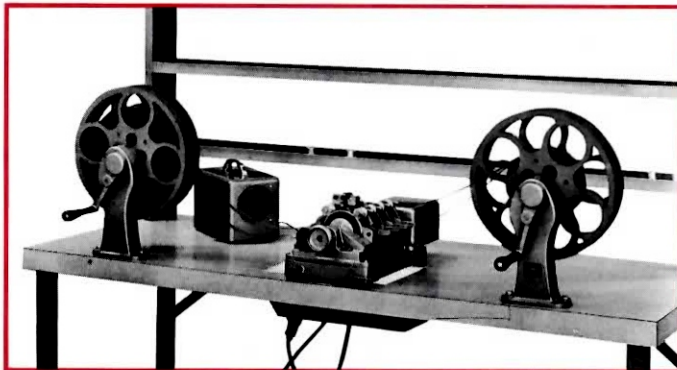


# E<sup>di</sup>ting tables and chairs

Moviola Editing Tables are designed specifically for those who work with film. They are sturdily built to stand years of rigorous use and have the pleasing appearance of modern office furniture.



Model TLRD-1 (Model T-1 table with light well, rack and drawer)



Model ES-1



Model EC-1

The top is self edged, heavy duty, high-pressure plastic supported on all sides by a sturdy steel framework. It provides a tough working surface that is chip, scratch and crack resistant. The smooth surface with a light colored linen pattern is easy on the eyes and easy to keep clean.

Square steel tubing leg assemblies add rigidity and are tipped with smooth plastic glides to protect floor and floor coverings. Two lower steel rails form a convenient foot rest and storage rack for reels and cans. The rails that support the top are pre-drilled to fit Moviola Rewinders. To install rewinders, merely drill through the top from underneath using the holes in the rails as a jig.

## FINISH

All metal parts are finished in durable, gray green hammertone baked enamel.

## SIZES

Model T-1 24" wide, 60" long, 31" high

Model T-2 28" wide, 60" long, 31" high

## ASSEMBLY

Editing Tables are shipped disassembled and packed in a compact wooden crate. They are easily assembled with a screw driver and a small wrench or pair of pliers.

## OPTIONAL EXTRA EQUIPMENT

**L**—Light well—9" x 12" frosted glass with two convenience outlets for equipment such as Sound Reader Amplifier and Motor Drive for Synchronizer—as illustrated.

**R**—Film Rack—four tier, for storage of film clips and supplies.

**D**—Supply Drawer—5" deep, 14" wide, 20" long.

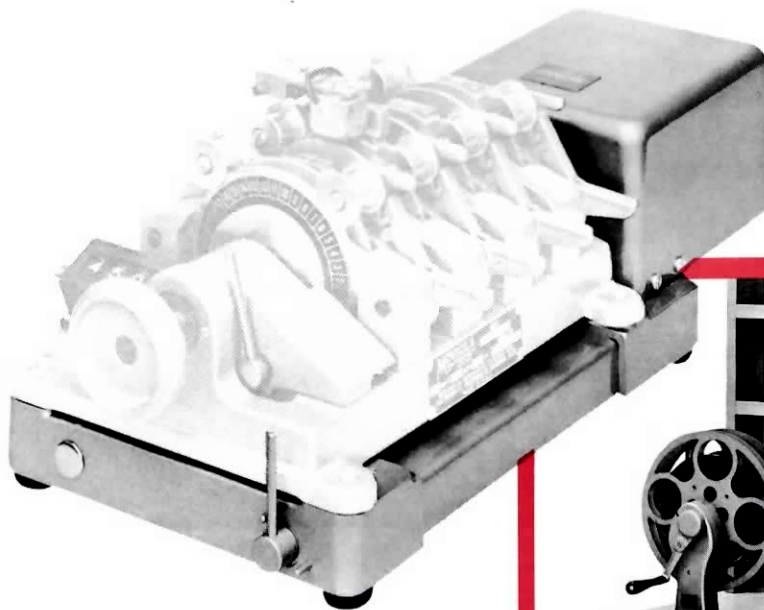
Model ES-1 Editing Stool has foam rubber cushions covered in dark green Naugahyde. Adjustable height — 21" to 28". Contoured adjustable back rest. Foot ring 20" diameter, chrome plated. Tubular steel construction with chrome plated glides.

Model EC-1 Editing Chair has foam rubber cushions covered in dark green Naugahyde. Adjustable height — 19" to 23". Contoured adjustable back rest. Tubular steel construction and ball bearing swivel casters.

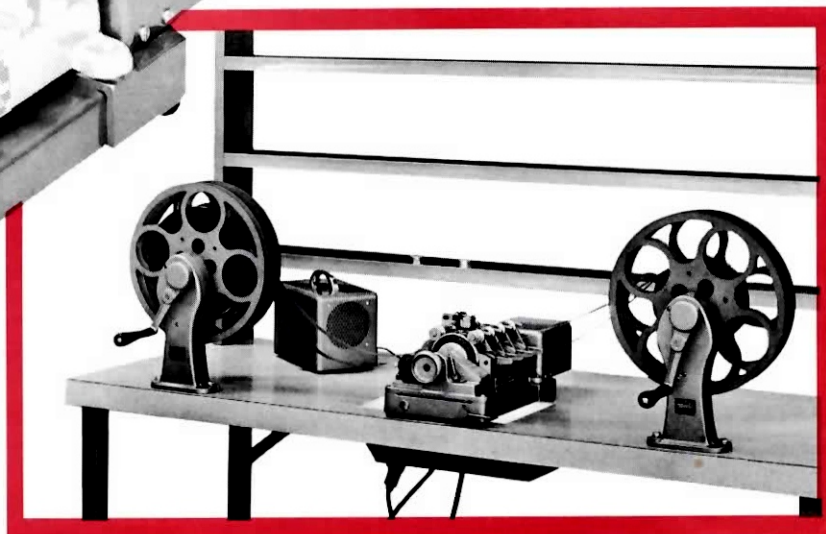
# Motor drive kit for synchronizers

## MODEL MDS

for 16mm, 35mm or combination Moviola Synchronizers



Model MDS shown attached  
to model SZD Synchronizer



Set up for producing sound on your Moviola Synchronizer equipped with a model MDS Motor Drive for Synchronizer. The other equipment: magnetic pick-up model MS-16; Amplifier Speaker model URS; and two model WDS-16 Moviola Rewinders; table model TLR-2

With this attachment a Moviola Synchronizer that is equipped with a magnetic pick-up head and amplifier speaker unit will produce continuous intelligible sound. It eliminates the difficult task of trying to manually drive the film at sound speed with the Rewinder.

To operate, just turn one lever which starts the motor and engages the drive mechanism. Turn the lever off, the motor stops and the drive mechanism is disengaged leaving the Synchronizer free wheeling for manual use.

The MDS has a friction drive for the safety of the

film. In case of a film snarl the synchronizer stops without damage to the film or to the motor.

This attachment is available as optional extra equipment on your new Moviola Synchronizer. Or, it can be installed on your present machine at our factory or by a Moviola dealer from instructions furnished with each kit.

When ordering as a kit designate the model and serial number of your Moviola Synchronizer.

Standard models drive from left to right. Right to left drive will be supplied on special order.



# moviola library reader

For 16mm motion picture films

SAVES TIME AND SPACE FOR SCHOOLS • EDUCATORS  
FILM LIBRARIES • EXECUTIVES • TV STATIONS



Versatile and portable Model LVR Timer counter extra

You can zip through film at up to six times sound speed (216'/min.) to points of interest, run at governed sound speed, slow to frame by frame speed, or stop for still frame analysis. The Moviola Library Reader will do all of this at variable speed forward or backward.

First time users require little instruction because of the simplified threading and control arrangement. If sound on the film is reproduced through ear phones, the quietness of film movement and absence of intermittent mechanism clatter, permit side by side

operation of several machines in one room. Designed for durability and easy maintenance, the machine is a delight to owners with limited up-keep facilities.

No longer is it necessary to construct individual and expensive screening rooms. The Moviola Library Reader is a "Portable Screening Room" that can be set up wherever a table and an electrical outlet are available. It is possible, at last, to scan a 16mm motion picture film in a manner similar to scanning a book from a library shelf.

## OPERATING FEATURES

### PICTURE

4 1/8" x 5 1/2" rear projected, with ample illumination for viewing in a normally lighted room.

### THREADING

Simple, straight through — no loops.

### SPEED

Variable, from zero to six times sound speed in cine mode forward or reverse. Accurately maintains speed at any setting.

### STILL FRAMING

Can be still framed without overheating the film.

### MARKING

Access to projected frame provided for grease pencil marking.

### REWINDING

High speed in either direction without switching reels.

### CAPACITY

Handles up to one hour of 16mm film.

### QUIET

No intermittent mechanism noise. Motion picture action produced by a rotating 12 sided prism.

### SOUND

High quality maintained by film transport stabilizing system. Playback through built-in speaker or plugged-in earphones. Optical sound reproduction is standard. Magnetic sound may be added.

### FILM PROTECTION

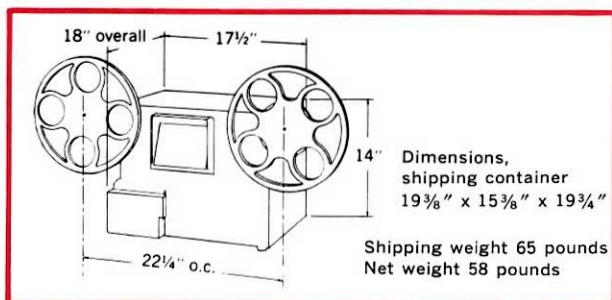
Continuous motion principle saves wear and tear on film perforations and minimizes hold down pressure required in film gate.

## DESIGN FEATURES

<b>CONSTRUCTION</b>	Cast aluminum chassis precision machined. Sub assemblies are demountable as independent units. All castings and mechanical parts are precision machined. Machine is fully operational in or out of carrying case.	<b>ILLUMINATION</b>	115V, 150 watt projection lamp cooled by air blower. Film protected from heat by filter glass.
<b>OPTICS</b>	Precision optics of professional quality.	<b>ELECTRICAL</b>	All circuits protected by fuse. Master switch with pilot lamp which shows machine is "ON."
<b>SOUND SYSTEM</b>	Fly wheel stabilizer is clutch connected to prevent scoring prints. Transistorized amplifier requires no warm-up.	<b>MAINTENANCE</b>	One thumb screw releases lamphouse for changing projection lamp and cleaning aperture.
<b>REEL SPINDLES</b>	Film tension automatically controlled by clutches that compensate for weight of reels.	<b>PORTABILITY</b>	Integral reel arms are hinged and swing into the case for carrying.
<b>DRIVE SYSTEM</b>	Special motor for combination variable speed or sound speed.	<b>FINISH</b>	Light green hammer tone baked enamel. Case—textured vinyl.



Illustration shows lamp house open for changing projection lamp and cleaning aperture plate.



### ORDERING DESIGNATIONS

LV without sound (variable speed motor only)  
LVR with sound (combination variable speed and governed sound speed motor).

### OPTIONAL EXTRAS

Counters:

Timer — to read seconds, minutes, hours.

Footage — to read frames and feet.

Magnetic sound:

Added to Model LVR only.

Headphones with cushions



# V ideo tape sound readers

## SAVES VALUABLE VIDEO TAPE MACHINE TIME

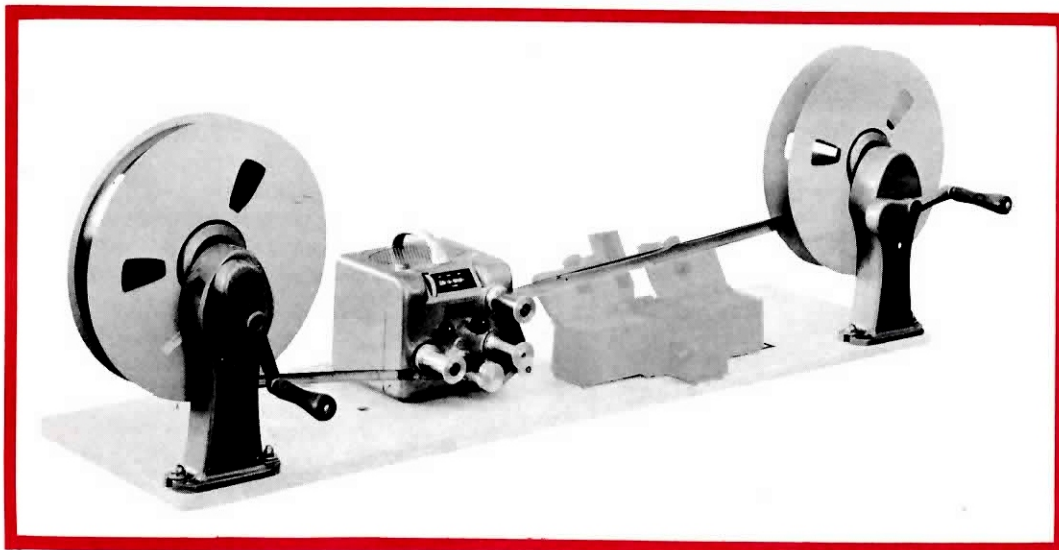
The Moviola Video Tape Sound Reader takes many of the editing functions from the video tape machine. Like an extra tape machine it can be used for identifying, cueing, timing and the assembly of commercials and other program inserts. It is a completely portable, self contained, battery powered, transistorized, program and cue track sound reader with a built-in timer counter. It allows time for cleaner, more accurate, splices by removing time-consuming work from an expensive machine that is in constant demand. Many editorial jobs are possible with the Moviola Video Tape Sound Reader, such as audio cuts, black to black edits, locating previously marked video cuts and editing from cue track information.



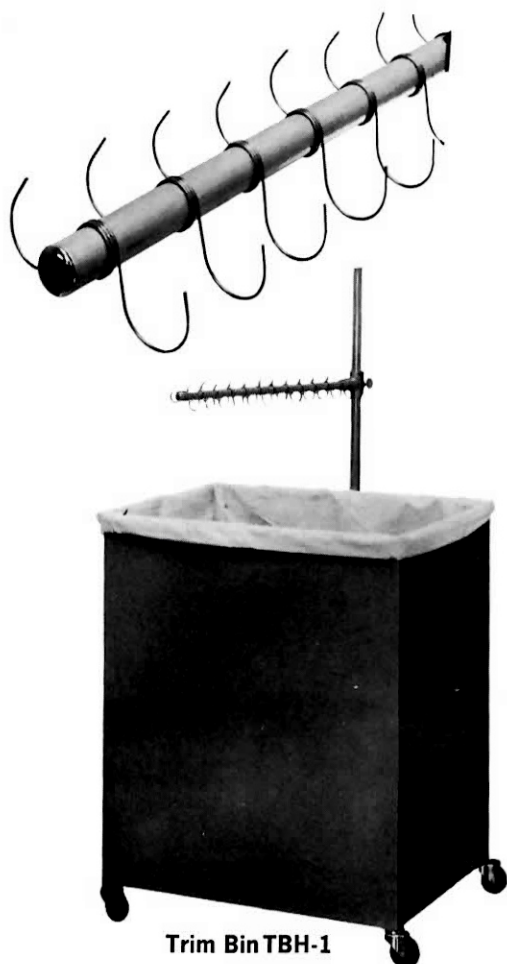
### FEATURES:

- No damage to coated side of tape and minimum head-stack wear—signals are picked up from smooth side.
- Long life battery powered transistorized amplifier.
- Amplifier has individual preamps for program and cue tracks.
- Automatic control switch shutoff to save batteries.
- Reversible magnetic head-stack for right or left hand operation.
- Built-in program timer counter.
- Complete portability—no connections.
- Ball bearing mounted rollers.
- Quality components and workmanship.
- Unitized, replaceable head-stack.
- Batteries readily available and easily replaced.

MODEL SRV



MODEL SRV SET UP WITH MODEL WV VIDEO TAPE REWINDERS



**Trim Bin TBH-1**

# Trim bins

Moviola's new concept in film trim bin design simplifies the film editor's task of temporarily storing trims for subsequent identification and reassembling.

Unlike ordinary trim bins with a limited number of hooks mounted in immovable positions, the flexible Moviola design permits adding, removing, or repositioning to suit the needs of the user.

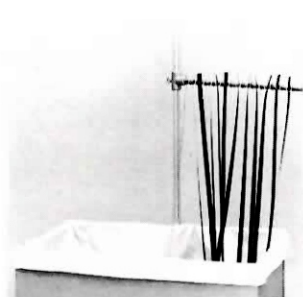
The Hooks are of spring steel wire so formed as to grip the Hook Arm with a self-locking principle wherever positioned.

The bin is constructed of heavy gauge steel riding on four full swivel industrial type casters. The grey-green hammertone baked enamel finish is not only durable but gives a pleasing appearance. All other metal parts have a corrosion resistant finish.

The liner is fabricated from a strong but soft and pliable drill cloth that is washable.

The Upright Post supporting the Hook Arm is easily detached from the Bin for shipping by removing 4 screws.

Post and Hook Arm assemblies are available for installation on existing bins.



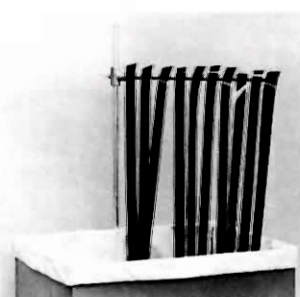
After filling hooks on one side



Arm swivels to expose hooks on the other side



If more hooks are needed, arms may be added



For another film size, hooks can be readily released and repositioned

## MODEL DESIGNATIONS

TBH-1 Trim Bin Complete, size 18"x24"x31" bin height  
TBH-2 Trim Bin Complete, size 24"x34"x31" bin height

### Trim Bin Parts

72017-1 Bin only, on casters 18"x24"x31" high  
72017-2 Bin only, on casters 24"x34"x31" high  
72016-1 Liner for 1 Bin  
72016-2 Liner for 2 Bin

### Trim Bin Parts

72024 Upright Post Assembly  
72018-1 Hook Arm Assembly 18" long w/12 double hooks  
72018-2 Hook Arm Assembly 24" long w/16 double hooks  
72015 Double Hook



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## Warranty

Moviola equipment is manufactured under the most rigid quality control conditions. All components are carefully tested and inspected before assembly, and the completed equipment is tested for performance before shipment. If the original purchaser encounters any difficulty with the operation of Moviola equipment, he should immediately contact his dealer and take full advantage of the warranty which is offered under the following terms and conditions:

**Mechanical components which are determined by the factory to have been defective at the time of manufacture, will be replaced, without charge, for a period of ONE YEAR from date of original purchase.**

**Electrical and electronic components (except tubes) are warranted for a period of ninety (90) days under the same conditions.**

**MAGNASYNC/MOVIOLA CORPORATION**

*A Subsidiary of Monogram Industries, Inc.*





**magnasync/moviola corporation**

*A Subsidiary of Monogram Industries, Inc.*

**5539 RIVERTON AVENUE / NORTH HOLLYWOOD, CALIFORNIA 91601 / 213-877-2791**

**PRICE LIST • JANUARY 15, 1970**
**PAGE**

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 FILM EDITING MACHINES  
 "SERIES 20"

**ITEM**
**PRICE**

Viewing screens on all standard "Series 20" Moviolas are 4" x 5". Separate Sound Heads are equipped to reproduce either Optical or Magnetic sound. Composite Sound Heads reproduce optical sound only. The 16mm Composite Sound Head is available on special order to reproduce magnetic as well as optical sound.

<u>35mm</u>	<u>16mm</u>		
	M-50	Table Model Viewer.....	\$ 325.00
		with magnetic attachment.....	50.00
		with slip on hood.....	10.00
C-20	K-20	Table Model Viewer without reel spindles.....	1095.00
D-20	L-20	Table Model Viewer with reel spindles.....	1495.00
UC-20-S	UK-20-S	Console Sound Model with picture head and separate sound head without reel spindles.....	2550.00
UD-20-S	UL-20-S	Console Sound Model with picture head and separate sound head with reel spindles.....	3075.00
UD-20-CS	UL-20-CS	Console Sound Model, including picture head with composite sound head installed thereon, and separate sound head, with reel spindles.....	3695.00
UD-20-C2S	UL-20-C2S	Console Sound Model with extra length cabinet for picture head with composite sound head installed thereon, and two separate sound heads, with reel spindles .....	4850.00

**"SERIES 20"**
**OPTIONAL EXTRA EQUIPMENT**

Counter, for Feet.....	\$ 70.00
Counter for Seconds only.....	95.00
Counters, for Frames only.....	160.00
Counter, for Hrs./Mins./Secs. (Available on L-20 and D-20 Models).....	175.00
Counter, Dual — Feet/Frames and Seconds only.....	165.00
Litewell, with tray.....	40.00
Film Bag and Frame.....	11.00
Transformer for 230 volt operation.....	40.00
Synchronous Motor Drive.....	245.00
Search Head (in place of Separate Sound Head), Catalog page 8).....	625.00
Model MK-16mm or 35mm Manual Search Head attachment, Catalog page 9.....	60.00
Model CE-20 Cabinet Extension Bracket, Catalog page 10.....	135.00
Electric Brake .....	225.00
Single Frame operation.....	295.00

**"SERIES 20" COMPONENTS**

<u>35mm</u>	<u>16mm</u>		
C-20H	K-20H	Picture Head only, suitable for mounting on existing Moviola Table Model or Console Model body without reel spindles.....	\$ 795.00
D-20H	L-20H	Picture Head only with reel spindles.....	1225.00
SC-20H	SK-20H	Separate Sound Head only, suitable for mounting on existing Console Model Body without reel spindles .....	600.00
SD-20H	SL-20H	Separate Sound Head only with reel spindles.....	700.00

8

SEARCH HEAD (Motorized)

9

SEARCH HEAD KIT (Manual)

<u>35mm</u>	<u>16mm</u>		
MK-35	M-16	Search Head, ordered as a separate unit interchangeable with any Separate Sound Head on an existing "Series 20" or "Preview" Moviola.....	1375.00
35mm	16mm	Search Head Kit with installation instructions to modify existing Separate Sound Head for manual sound track searching.....	60.00
M-35	MK-16		

10

ADD-A-SOUND HEAD KIT

CE-20,

Cabinet Extension Bracket suitable to accommodate an additional separate sound head, either 35mm or 16mm, on an existing "Series 20" Moviola .....	135.00
--	--------

11

<u>35mm</u>	<u>16mm</u>		
DS-20	LS-20	Composite Optical Sound Head suitable for mounting on standard 35mm or 16mm picture heads....	600.00
		Optional Magnetic Sound available.....	175.00



35mm	16mm		
LGS-35	LGS-16	Large Screen Kit with installation instructions to increase picture size from standard 3" x 4" to approximately 4" x 5".....	70.00

## 13, 14

## SOUND READERS

Optical Only			
SRO-35mm	SRO-16mm	Reads just one medium, left to right emulsion up, or right to left emulsion down.....	\$ 150.00
SRB-35mm, 16mm, 35-32mm		Reads any of the three optical media, left to right, right to left, emulsion up or down.....	195.00
Magnetic Only			
SRM 35mm	SRM-16mm	Reads just one medium, left to right or right to left, magnetic coating up or down.....	70.00
	SRM	For 35mm, 16mm, or 17½mm, left to right, right to left, Magnetic coating up or down.....	95.00
Comb. Opt. & Mag.			
	SRC	Reads all media listed above, left to right, right to left, emulsion or magnetic coating up or down....	250.00
AMPLIFIER — SPEAKER UNITS	URS	Optical or Magnetic (4" speaker).....	72.00

## 15, 16

## REWINDERS

Designation with Shaft only:			
WA-35	WA-16	Accommodates 1 reel.....	28.00
WB		Accommodates 2 reels 35mm or 2 & 3 reels 16mm	29.00
WC		Accommodates 3 reels 35mm or 3 & 4 reels 16mm	29.00
WD		Accommodates 4 reels (16mm only).....	29.00
WDU		Accommodates 4 reels 35mm & 16mm (Furnished with Universal Joint and End Support).....	37.50
WAT		Model WA-35 with #71226 Titewind Attachment for winding either 35mm or 16mm onto plastic cores .....	57.50
WV		Rewinder equipped with special hub for Video Tape reels .....	53.50
Designation with shaft, spacers, and clamps as required:			
WBS-35	WBS-16	Accommodates 2 reels.....	37.00
WCS-35	WCS-16	Accommodates 3 reels.....	39.00
	WDS-16	Accommodates 4 reels (16mm only).....	41.00
WDUS-35	WDUS-16	Accommodates 4 reels (furnished with Universal Joint and End Support).....	53.00
		Elbow Brake, extra.....	17.00
		Add "BL" for Elbow Brake on left hand rewinder, "BR" for right	

## 17, 18

## REWINDER PARTS

Part Number		
	"W" Rewinder, less shaft.....	23.00
71210	Shaft, 1 reel, 35mm.....	5.00
71229	Shaft, 1 reel, 16mm.....	5.00
71211	Shaft, 2 reels 35mm or 2 & 3 reels 16mm.....	6.00
71212	Shaft, 3 rolls 35mm or 3 & 4 reels 16mm.....	7.20
71213	Shaft, 4 reels 35mm or 16mm with Universal Joint.....	15.20
71216	End Support for #71213 Shaft.....	4.00
71125	Spacer, 35mm .....	2.00
71128	Spacer, 16mm .....	2.00
71115	Spring Clamp .....	6.60
71226	Titewind Attachment .....	29.50
71237	Friction Drag (thumb screw, spring and plug)....	4.00
71144	Adapter for Plastic Core.....	9.00
71600	Swivel Base .....	48.00
71258	Leader Stanchion .....	24.00
71243	Video Tape Hub.....	30.00
71635	Stacking Block .....	10.00
71236-1	Special Shaft with Universal Joint 20" long.....	21.00

continued next page

19, 20	APR-16	Automatic Power Rewinder for 16mm.....	\$ 425.00
POWER REWINDERS,	APR-35	Automatic Power Rewinder for 35mm.....	425.00
Automatic	APR	Automatic Power Rewinder for 16 and 35mm.....	440.00
	APR-70	Automatic Power Rewinder for 70mm.....	440.00
		Titewind attachments included with automatic Power Rewinders	
POWER REWINDERS	PR-16	Power Rewinder for 16mm.....	225.00
Conventional	PR-35	Power Rewinder for 35mm.....	225.00
	PR	Power Rewinder for 16 and 35mm.....	225.00
	PR-70	Power Rewinder for 70mm.....	275.00
		Titewind attachment, extra.....	35.00
		Add "T" to model designation.....70mm	40.00

	Part Number		
POWER REWINDER PARTS	71547	35mm and 16mm Sensing Arm Assembly.....	\$ 30.00
	71610	70mm Sensing Arm Assembly.....	45.00
	71503	35mm and 16mm Titewind Arm Assembly.....	35.00
	71611	70mm Titewind Arm Assembly.....	50.00
	71560	70mm Plastic Core Adapter.....	8.00
	71527	35mm Plastic Core Adapter.....	5.00
	71525	16mm Plastic Core Adapter.....	5.00
	71524	16mm Reel Adapter.....	5.00
	46342	70mm Reel Adapter.....	6.00
	71562	Latch .....	7.00
	71517	Titewind Spring .....	.75
	71541	35mm and 16mm Spindles.....	13.00
	71556	70mm Spindles .....	15.00
		Heavy duty foot controller ordered in place of standard.....	49.00
		Heavy duty foot controller ordered as separate unit Part No. 1199....	60.00

21, 22	Left Hand	Right Hand	
DIFFERENTIAL GEAR	RHB-2L	RHB-2R	Accommodate 2 reels up to 15" diameter..... \$ 400.00
REWINDERS			

23, 24	Synchronizers are furnished with a footage counter. Combination synchronizers are equipped with two footage counters. Counters "add" as film passes through synchronizer from "Left to Right." "Right to Left" operation available on special order at no extra charge. Standard arrangement for 16mm sprockets is with teeth farthest from the operator. Specify if teeth nearest operator is desired.		
SYNCHRONIZERS			

For 35mm	For 16mm	Sprockets	Price
SYA	SZA	1	\$ 110.00
SYB	SZB	2	140.00
SYC	SZC	3	170.00
SYD	SZD	4	200.00
SYE	SZE	5	265.00
SYF	SZF	6	295.00

25, 26	Add "-A" or "-B" to Model designation for arrangement: "-A" for 16mm sprockets nearest operator      "-B" for 35mm sprockets nearest operator		
COMBINATION 16 and 35mm SYNCHRONIZERS			
Model	35mm Sprockets	16mm Sprockets	Price
SYAZA	1	1	\$ 265.00
SYAZB	1	2	295.00
SYAZC	1	3	325.00
SYBZA	2	1	295.00
SYBZB	2	2	325.00
SYCZA	3	1	325.00

SYNCHRONIZER	Counter for Hrs./Min./Secs. (in place of footage counter).....	Additional..	\$ 15.00
OPTIONAL EXTRA EQUIPMENT	Counter for Frames only (in place of footage counter).....	Additional..	95.00
	Counter for Seconds & 1/10 Seconds (in place of footage counter)...	Additional..	50.00
	Additional Seconds or Frames Only counter.....		135.00
	Additional Hrs./Min..Secs. Counter.....		115.00
	Sprocket for either 17½ or 35mm (in place of 35mm).....	Additional..	22.50
	Sprocket for 35mm (in place of 16mm).....	Additional..	22.50
	Optical Attachment OS-16 for 16mm (rear sprocket only).....		150.00
	Clutch mechanism disengaging adjacent sprockets (Specify location desired on ordering).....		86.00
	Magnetic attachment for synchronizer arm: MS-35 for 35mm; MS-16 for 16mm...		35.00
	Model URS Amplifier Speaker Unit for Magnetic attachments.....		72.00
	Model MDS Motor drive attachment for synchronometer (Specify number and size of sprockets on your synchronizer when ordering) Catalog page 29.....		200.00



27, 28

CRAB DOLLY

For Motion Picture &amp; Television Cameras..... \$6500.00

## Optional extra equipment

Hi-Hat, 9", used for additional boom height..... \$ 125.00  
 Side Boards, set of two 12" wide..... 125.00

29

EDITING TABLE and CHAIRS

T-1 24" x 60" x 31" high with bottom rails for storage  
 of reels and cans..... \$ 125.00  
 T-2 28" x 60" x 31" high..... 135.00

## Optional extra equipment for either of above tables

L 9" x 12" Litewell with frosted glass, 2 convenience  
 outlets, and 10' power cable..... \$ 24.00  
 R 4-tier Storage Rack..... 28.00  
 D Supply Drawer supported on nylon runners..... 35.00

## Sample Model Designation:

TLRD-2 28" x 60" table with litewell, 4-tier Rack, Drawer.. \$ 222.00

## Chairs and Stools

EC-1 Editing Chair ..... \$ 40.00  
 ES-1 Editing Stool ..... 43.00

30

MOTOR DRIVE KIT  
for SYNCHRONIZERS35mm  
MDS-3516mm  
MDS-16

Motor Drive Kit with instructions for installation on  
 existing Moviola Synchronizers. On ordering design-  
 ate model and serial number of your synchronizer \$ 190.00

31, 32

LIBRARY READER 16mm only

LV  
LVR

Without sound (variable speed only)..... \$1595.00  
 With optical sound (combination variable speed  
 and governed sound speed)..... 1995.00

## Optional Extras

Counter-timer to read seconds, minutes, hours ... \$ 145.00  
 Counter-footage to read frames and feet..... 145.00  
 Magnetic Sound added to Model LVR only..... 125.00  
 Headphones, with cushions..... 10.00

33

VIDEO TAPE SOUND READER

SRV

Sound Reader for 2" video tape to playback pro-  
 gram and cue track..... \$ 495.00

34

TRIM BINS

TBH-1

TBH-2

Trim bin complete 18" x 24" x 31" high with liner,  
 upright post, and one arm with 12 hooks (double). \$ 55.00  
 Trim Bin complete 24" x 34" x 31" high with liner,  
 upright post, and one arm with 16 hooks (double). 70.00

## Trim Bin Parts:

72017-1 Bin only, on casters 18" x 24" x 31" high..... \$ 40.00  
 72017-2 Bin only, on casters 24" x 34" x 31" high..... 47.00  
 72016-1 Liner for -1 Bin..... 9.00  
 72016-2 Liner for -2 Bin..... 10.00  
 72024 Upright post assembly..... 6.00  
 72018-1 Hook arm assembly 18" long with 12 double hooks 9.00  
 72018-2 Hook arm assembly 24" long with 16 double hooks 12.00  
 72015 Double hook ..... .25

magnasync

moviola

All prices F.O.B. factory. Extra charge for export packing. Equip-  
 ment will be invoiced at prices prevailing at time of shipment.  
 Items on this price list are those most commonly used. Inquiries  
 regarding special equipment are welcomed.

magnasync/moviola corporation

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